8-4-5;8-2;9-1,2,6;11-3;12-5

Odds On You

Grade Level	Eighth
Minimum Time Required	Two 40 minutes class periods
Materials/Resources	Dice-several sets Handouts
Subject Area(s)	Guidance

Project Description:

1. Go over the information from the Odds on You Background Information with the students. If possible, give the students copies of this information.

2. Divide the students into small groups of three or four students. Tell them to help each other and discuss their results as they go along.

3. Give each student one pair of dice ands copies of the Odds on You—Record Sheet and Odds on You Line-by-Line Instructions. Go over the first few categories—Sex and Parent's Income.

   Sex: Roll 1 die. Even number you are female, odd number you are male.
   In Step 1, students confront a very real emotion. Some are delighted to be a boy. Some are disappointed to be a girl. Others are relieved to be their own sex. Have the students talk about these reactions.

   Parents' Income:

Mother: Roll 1 die.	Father: Roll 1 die.
1-2 She is not employed.	1 He is not employed
3 Roll again	2 He is not in the family unit.
4-6 She is employed	3-6 He is employed

   Roll two dice and sum. Use this scale to determine the annual income for each employed parent. Use the same roll for both incomes.

Mother: $2,000 x sum of dice.	Father: $4,000 x sum of dice.

   Step 2 establishes a fact of life over which the students have no control--their parents' income. Yet, important information is readily apparent. Working women earn approximately 58 percent of that earned by working men. Many women work. A father is not always in the family unit. The mother is likely to be the head of household. Employment and income trends show that husband's and wife's incomes tend to be on similar levels within their sex-income range.

4. As the activity progresses, students move through the mathematics they take in high school to the electives section, where they experience typical sex-typed choices. They see an immediate reward for electing a course that provides them with a marketable skill, such as computer programming. Later in the activity, the experience points gained from these electives will affect their employment opportunities.

5. As students finish “Odds on You”, each one should record the indicated information on charts (see following headings) placed on an overhead or a chalkboard. This provides a quick visual comparison of results.

FEMALE

High School Math	Experience Points	Career	Salary

MALE

High School Math	Experience Points	Career	Salary

6. Using the “Odds on You Discussion Questions”, facilitate a discussion with the students. If possible, give the students a copy of the discussion questions. Assign each group one or two of the sections to answer and have the results presented to the whole group.

In dividing students, create separate groups of females and males and mixed groups. Observe any difference in the behavior of the groups.

While the audience for Odds on You is the secondary student, the activity is valuable for elementary teachers because it gives them a review of critical decisions that lie ahead for their students. It is also extremely effective when used with parents or an audience of educators from various disciplines and grade levels.

Career Development Standard	Knowledge of the benefits of educational achievement to career opportunities. Understanding how work relates to the needs and functions of the economy and society. Skills to make decisions. Knowledge of different occupations and changing male/female roles. Understanding the process of career planning.
Career Development Indicator	Describe the skills needed to adjust to changing occupational requirements. Describe the relationship between work and economic and societal needs. Describe personal beliefs and attitudes. Describe how career development is a continuous process with a series of choices. Identify ways in which decisions about education and work relate to other major life decisions. Describe stereotypes, biases, and discriminatory behaviors that may limit opportunities for women and men in certain occupations. Identify strategies for managing personal resources (e.g. talents, time, and money) to achieve tentative career goals.
Delivery Level	Review
Academic Standards	
Language Arts	1.1.a Use specific cues/strategies to make connections with, predict meaning of, and comprehend information within text. 1.4.c Collect and summarize information to make reasonable and informed decisions. 3.1.b Use various listening techniques in problem-solving and

	decision-making situations. 3.3.b Use specific questioning strategies to recall oral/visual information.
Employability/SCANS Skills	Basic Skills Thinking Skills Interpersonal Skills
Assessment/Rubric	Students will be evaluated based on class participation and the "Odds On You Record Sheet".

Submitted by: NJ Statewide Nontraditional Career Assistance Center
Gender Equity Classroom Activities

Odds On You Background

Our lives are filled with decisions. Some seem very important at the time but have little lasting effect. Others do not seem important at all and yet may have a major impact on our lives. “Odds on You” highlights some important decisions or turning points in your career development. The activity is not intended to predict your future life, but by starting with your academic goals and experiences, you might get an idea of what some possibilities are for your near future.

Odds on You uses a mathematical model. Mathematical models are common in fields such as business, economics, urban planning, science, and medicine. With the growing use of computers, mathematical models are becoming more common in other fields as well. The following is an example of how a mathematical model is commonly used:

Suppose you work as a buyer for a shoe store. It is time to order the spring shoe selection. Several styles are available in sizes 4 to 10. Should you buy 100 pairs of each size? Why or why not? If you wear a common or average size, think back to how hard it is to find sale items that fit you. It is anticipated that some will answer that 100 pairs of each size is a good order. Others will, correctly, argue that the number of people wearing each size is not the same, and that relatively large quantities of middle sizes (6, 7, 8) and very few of the other sizes (4, 5, 9, 10) should be purchased. A good model will predict the number of shoes of each size the buyer needs to purchase.

To give a realistic view of what can happen to you and other students after high school, all decisions in Odds on You (those you make in real life) are left to chance (rolling of dice). The outcomes of these chance decisions are, however, based on statistics about young people. If you are female, there are four chances in ten that you will become pregnant during the ages 14 to 19. The outcomes in the Cast Your Fate to the Wind section (item 5) reflect this statistic. If you are male, there is more than a 90 percent chance that you will be fully employed during most of your life. If you are female and over 16 years of age, there is a 60 percent chance that you will be working at any given time. A woman can expect to work an average of 22.9 years. These are the types of data from which the Odds on You model was developed.

Participating in the activity as a member of the opposite sex gives students a better ideas of the choices and outcomes available to their brothers and sisters or their girl – or boy – friends. This is a very important aspect of the activity. It is important that you understand others’ options in life as well as your own.

It is possible to change the outcomes in real life. Women do not have to settle for smaller salaries. Critical areas that can help for females and males include the following:

1. Mathematics taken in high school—taking more math expands job options.

2. Elective choices in high school or post-high school education—taking computer education or skill building courses expands job options (see which courses give experience points in Section 4D as you go through the activity.

3. Recreational activities –many activities provide opportunities for learning skills and developing the ability to work with people. These help in getting a job.

4. Type of training or college major selected—some very popular college majors provide little employment opportunity. Some types of vocational training offer excellent job opportunities.

5. Working in part-time jobs during the educational years—part-time jobs should require considerable learning or on-the-job training for skills usable in future jobs.

6. Taking a nontraditional job—the larger salaries are in fields not ordinarily entered by women. Careers which are nontraditional for males offer different types of advantages.

Odds On You Record Sheet

Directions: Use this page to record your results.

NAME:

1. SEX: Male_____ Female_____

2. PARENTS' INCOME:

   Employed Mother _____ Annual Income_____
   Employed Father _____ Annual Income_____
   Total _____

3. YOUR INCOME DIRING HIGH SCHOOL:
   Do you work: Yes____ No_____ Annual Income_____

4. YOUR HIGH SCHOOL EDUCATION:

   A. Graduate_____
   B. Math Experience_____
   C. More Math?_____
   D. Electives
   1)_____
   2)_____

5. CAST YOUR FATE TO THE WIND: Married?_____ Pregnant?_____

6. POST HIGH SCHOOL: Circle your next step.

   Armed Forces | Vocational School | Out of Labor Force
   Community College | Job Market, Type____ | College

7. COMMUNITY COLLEGE TRAINING:

8. COLLEGE:

   A. Major: Requires Calculus?_____ Requires No Calculus?_____
   B. Graduate? _____
   C. Out of Labor Force_____ Armed Forces_____ Job Market, Type_____
   D. Further Degree?_____

9. ARMED FORCES:_____

10. OUT-OF-LABOR-FORCE STATUS:_____

11. VOCATIONAL TRAINING:_____

12. JOB MARKET: Circle one. TYPE I TYPE II TYPE III

    A. Delay in Finding Work_____
    B. Kind of Job_____
    C. Salary_____

Are you satisfied with how chance decided your fate? What decisions made with the dice in this game can you claim for yourself? You have probably already made several decisions about your life. If you have time, go back through the activity and make your own decisions without the dice.

Odds On You Line-By-Line Instructions

Go through each section in order unless directed to skip. Keep track of your results on the Record Sheet.

1. SEX: Roll 1 die. Even number you –you are female. Odd number-you are male.

2. PARENTS' INCOME:

Mother:	Roll 1 die.	Father:	Roll 1 die.
1-2	She is not employed	1	He is not employed.
3	Roll again.	2	He is not in the family unit..
4-6	She is employed.	3-6	He is employed.

If either or both parents are employed, roll two dice and sum. Use this scale to determine the annual income for each employed parent. Use the same roll for both incomes.
Father: $4,000 x sum of dice = annual income for father.
Mother : $2,000 x sum of dice = annual income for mother

3. YOUR EMPLOYMENT DURING HIGH SCHOOL:

Female:	roll 1 die.	Male:	Roll 1 die
1-2	Employed.	1-3	Employed.
3-6	Not employed.	4-6	Not employed.

If you are employed, roll two dice and sum. Then calculate the annual income.
Employed female: $300 x sum of dice = annual income
Employed male: $480 x sum of dice = annual income

Bonus: If sum of dice was more than 8, collect experience points 100 if female, 200 if male.
Record in box on "Record Sheet."

4. EDUCATION IN HIGH SCHOOL:

4A.

High School:	Roll two dice and sum.
2-3	Graduate, top 8 percent of class (50 experience points)
4-8, 10-12	Graduate
9	Drop out of high school. Go directly to Section 5.

4B. High school math: Roll two dice and sum to determine your math experience.

Female:		Male:	
11	No math	12	No math
6, 10	General math	7	General math
8, 10	Algebra I	5, 9	Algebra I
2, 7, 12	Geometry	3, 6	Geometry
4, 5	Algebra II	8, 10, 11	Algebra II
3	Calculus or fourth year math (Record 100 experience points)	2, 4	Calculus or fourth year math (Record 100 experience points)

4C. High school math: Your determination to continue in math depends on many factors. See if you have any special reason to take more mathematics. Roll two dice and sum.

Female:

2	A teacher encourages you in junior or senior high	For rolls 2-5, repeat section 4B and take the higher math of your two tries. Then go on to Section 4D.
3	You took algebra in the eighth grade.	
4	You enjoy math.	
5	You have a clear career goal.	

6-12	No reason to take more math.	Go on to Section 4D.

Male:

2, 3	Your parents encourage you.	For rolls 2-6, repeat section 4B
4	You have a career goal.	and take the higher math of
5	You are good at math.	your two tries. Then go on to
6	Your parent expect you to take math.	Section 4D.
7-12	No reason to take more math	Go on to Section 4D

4D. High school electives: Roll two dice and sum. Select first elective based on this roll. Roll again and select a second elective. Record your experience points in the box on the Record Sheet.

Female:

2	Computer Programming (200 experience points)
3, 5, 9, 11	Typing, Bookkeeping, Accounting (50 experience points)
4, 10	Art, Journalism, Music (25 experience points)
6-8	Home Economics (25 experience points)
12	Automotive. Drafting, Welding, Woodshop (150 experience points)

Male:

2-4	Typing, Bookkeeping, Accounting (100 experience points)
5, 10	Computer Programming (150 experience points)
6-8	Automotive, Drafting, Welding, Woodshop (100 experience points)
11, 12	Home Economics (25 experience points)

5. **CAST YOUR FATE TO THE WIND:**
Roll two dice and sum.

Female:

2, 12	Get married (then roll one die).	1-4	Go to Section 10.
		5-6	Go to Section 6.
3-6	Get pregnant (then roll one die).	1-3	Go to Section 10.
		4-6	Go to Section 6.
7-11	Go to Section 6.		

Male:

2-3	Get married (go directly to Section 12B, Job Market, as Type I).
4-12	Go to Section 6.

6. **POST-HIGH SCHOOL:**
Roll two dice and sum. Find out what you do after high school based on the appropriate math category determined in Section 4B.

If your parents and you together earn over $28,000 per year, take an extra roll and choose the result you prefer within your math category.

A. High School Dropout

2-3	Get G.E.D. (Go to 6C)
4	You are out of the labor force. (Go to 10)
5-9	Go to the job market, Type !. (Go to 12)
10-12	Go to community college. (Go to 9)

B. No math

2-3	Go to armed forces. (Go to 9)
4	You are out of the labor force. (Go to 10)
5	Go to vocational school. (Go to 11)
6-10	Go to job market, Type I. (Go to 12)
11-12	Go to community college. (Go to 7)

C. General Math or Algebra I

2-4	Go to community college. (Go to 7)
6-7	Go to job market, Type I. (Go to 12)
8	Go to armed forces. (Go to 9)
9-10	Go to vocational school. (Go to 11)
11	You are out of the labor force. (Go to 10)
12	Go to college. (Go to 8)

D. Geometry or Algebra II

2-5	Go to college. (Go to 8)
6-8	Go to community college. (Go to 7)
8	Go to armed forces. (Go to 9)
9-10	Go to vocational school. (Go to 11)
11	Go to vocational school. (Go to 11)
12	Go to armed forces. (Go to 7)

E. Calculus or Fourth-Year Math

2	Go to job market, Type I. (Go to 12)
3-9	Go to college. (Go to 8)
10-12	Go to community college. (Go to 7)

7. **COMMUNITY COLLEGE:**

Roll two dice and sum.

Female	Male	
2-5	2-5	Take college credit courses, transfer to college in two years. (Go to 8)
6-8	7	Take vocational training courses, no additional math. Go to job market, Type I. (Take 200 experience points.) (Go to 12)
9		Take math missed in high school and continue in college credit courses. (Go to 8)
10	8-10	Take math and vocational training courses. Go to job market, Type II.(Take 300 experience points.) (Go to 12)
11-12	11-12	Go to job market, Type I. (numerous reasons) (Go to 12)

8. **COLLEGE**

8A. College major: Roll two dice and sum. Use your high school math category. Note: In many universities, up to 75 percent of all possible majors require calculus, including science, economics, business, engineering, and premedicine3. Traditionally, non-calculus majors (librarianship, music, elementary education, literature, and history) are being strongly influenced by computers and, hence, mathematics.

	Female	Male	
General Math	2-11	2-11	Major requires no calculus.
Or Algebra I	12	12	Major requires calculus.
Geometry	2-10	2-9	Major requires no calculus.

Or Algebra II	11-12	10-12	Major requires calculus.
Calculus or	2-9	2-8	Major requires no calculus.
Fourth-Year Math	10-12	9-12	Major requires calculus.
Bonus:	If you took high school Algebra II or beyond, take another roll of the dice and see if you can get into a calculus major.		

8B. College graduation: roll two dice and sum.

Female	Male	
4-7	4-6	Did not graduate. (Go to 8C)
2, 3, 8-12	2, 3, -12	Graduate. (Go to 8D)

8C. Did not graduate: Roll two dice and sum.

Female	Male	
2-4, 7-12	4-6	Go to job market, Type I. (Go to 12)
5-6	12	Out of labor force. (Go to 10)
---	9	Go to armed forces. (Go to 9)

8D. You graduate! In Section 8A, you determined whether your major needed calculus. Use the major now to find out what you do after college.

Major required calculus:

Female	Male	
2-7, 12	2-7	No further degree. Go to job market, Type III. (Go to 12)
8, 10	8-10	M.A., Ph.D., or professional degree. Go to job market, Type III. (Go to 12)
9	11	No further degree. Out of labor force. (Go to 10)
11	12	M.A., Ph.D. Out of labor force. (Go to 10)

Major required no calculus:

Female	Male	
2-4, 7, 9	2-4, 8, 9	No further degree. Go to job market, Type II. (Go to12)
5-6	10	No further degree. Out of the labor force. (Go to 12)
8, 10	5-7	M.A., Ph.D., or professional degree. Go to job market, Type II. (Go to 12)
11-12	11-12	M.A., Ph.D. Out of labor force. (Go to 10)

9. **ARMED FORCES:**
Roll two dice and sum.

Female	Male	
2-7	2-6	Stay initial enlistment period (three to four years). (Take 200 experience points.) Go to job market, Type I. (Go to 12)
8-10	7-9	Re-enlist, three to four years. (Take 250 experience points.) Go to job market, Type II. (Go to 12)
11-12	10-12	Stay 20 years and retire with a pension of $14,832/year. Go to questions at end of Record Sheet.

10. **OUT OF LABOR FORCE:**
Roll two dice and sum.

Female	Male

6-8	4-8	Go to job market, Type I, at least 25 years of your life. (Type II if you have calculus.). (Go to 12)
4-5	3, 9	Unemployed, not eligible for compensation. This is your life, well past the age of 24. What are your options now? Go to questions at the end of the Record Sheet.
2, 3, 9-12	2, 10-12	Other unpaid positions. What might these be? What are your options now? Go to questions at the end of the Record Sheet.

11. **VOCATIONAL SCHOOL OR APPRENTRICESHIP TRAINING:**
Roll two dice and sum.

Female	Male	
4-5	2	Service training (Take 200 experience points.)
6-8	3	Clerical training (Take 200 experience points.)
3	10-12	Fire or police protection (Take 300 experience points.)
2	4, 6	Mechanic or repair (Take 300 experience points.)
9-10	9	Health occupations (Take 300 experience points.)
11	8	Machining, printing, industrial (Take experience points.)
12	5, 7	Electrical, carpentry, plumbing (Take 300 experience points.)

12. **JOB MARKET:**
First, you need to find out how long it takes you to get a job (12A). Then you will use your Type I, Type II, or Type III in the job category section (12B).

12A. Delay in finding a job: Roll two dice and sum.

School Dropout

Female	Male	Delay
2-7	2-6	one to four weeks
8-9	7-8	five to 14 weeks
10	9, 11	15 to 26 weeks
11-12	11-12	more than 27 weeks

High school graduate

Female	Male	Delay
2-6	2-6	one to four weeks
7-8	7-8	five to 14 weeks
9-10	9-10	15 to 26 weeks
11-12	11-12	more than 27 weeks

Education beyond high school

Female	Male	Delay
2-6, 9	2-6, 10	one to four weeks
7, 8, 10	7-9	five to 14 weeks
11-12	11-12	15 to 26 weeks

For every 400 experience points you have, cut four weeks off delay time in Finding a job.

12B. Jobs: If you Type I and have 400 experience points, go on to Type II.
Type I: Roll two dice and sum.

	Female	Male
Clerical (secretary, clerk)	4-6	4

Service Work	10-12	3, 9
Professional, Technical	8	6
Operative (machine operator, drivers)	9	7
Sales	7	10
Managerial, Administrative	2	5
Laborers	---	11
Craft Worker	---	8
Transportation, Agriculture, Private Household, Other	3	2, 12

Type II: Roll two dice and sum. (Includes educators)

	Female	Male
Clerical	8-9	---
Service	2-4	4
Professional, Technical, Educator	6-7	6-7
Operatives	11	3, 5
Managerial, Administrative	5	8-9, 12
Sales	10, 12	2
Craft Workers	---	10-11

Type III: Roll two dice and sum. Professionals (Excludes educators)

	Female	Male
Scientist	3, 11, 12	2, 3
Engineer	6	5, 9
Physician	10	4
Others (Veterinarian, C.P.A., M.B.A,. Dentist, Pharmacist)	7-9	6-8
Lawyer	2, 4, 5	10-12

12C. Salary

Salary is determined by your training, your experience, and your education. These salaries represent national average starting salaries (1990).

	Type I		Type II	
	Female	Male	Female	Male
Clerical	11,900	19,000	13,300	21.000
Service	9,000	16,000	9,600	16,800
Professional, Technical	15,000	25,000	18.000	27,500
Operative	10,800	17,600	10,800	17,600
Sales	8,600	20,700	11,400	27,000
Managerial, Administr.	12,900	23,000	20,900	33,000
Laborer	----	16,080	----	----
Craft Worker	----	21,400	----	22,300
Transportation, Ag	10,900	20,400	----	----

	Type III	
	Female	Male
Engineer	30,000	30,000
Physician	48,000	52,000
Scientist	35,000	36,000
Lawyer	36,000	38,000

Other	25,000	27,000

Odds On You Discussion Questions

Section I: Sex What effect did sex have in the choices and future of members of your group?

Section : Parents' Income Why might it be reasonable that the same roll of dice determines the income for both parents? Are there differences in the incomes of men and women today? What will close the wage gap between men and women?

Section 3: Your Income During High School What jobs provide skills or training for the future? What are the differences in learning opportunities between working as a childcare worker and an electronics assistant?

Section 4: Your High School Education Many students do not finish high school. What is the likelihood of male and female students in your school system completing a fourth year of high school math? What types of skills are learned in elective courses? Why would some electives be given high experience points while others few or none? Why might there be differences between males and females in number of experience points awarded for the same elective?

Section 5: Cast you Fate to the Wind Ten percent of females ages 12 to 18 become pregnant. What might happen after "they lived happily ever after?"

Section 6: Post High School What is a G.E.D? How do you get one? What training is offered at a vocational school? Are there other ways to acquire this training without going to school? Why might students with high family incomes have more choice (a second roll of dice) in what they do after high school?

Section 7: Community College Most universities and colleges require students to take several basic courses during their first two years. Many of these courses are also offered in community colleges. What are the relative costs of the two way to take courses? How easy is it to transfer to a university after two years? How do vocational training courses at a community college differ from vocational schools? What are the advantages or disadvantages of the community college versus the vocational school?

Section 8: College Many college students are reluctant to take calculus, but without calculus, they limit the choices they have for college majors. Non-calculus students often end up in overcrowded fields and have difficulty finding jobs. Males and females have different reasons for continuing in math. What are some of these reasons? What are your plans for taking mathematics courses?

Section 9: Armed Forces A comprehensive set of tests that include algebra and geometry questions is given to new recruits in the armed forces to determine training programs. What effect would this training have on employment opportunities when one returns to civilian life?

Section 10: Out of the Labor Force Many will finish the activity at this section. Reflect on your life situation in the game at this point. You may be married, have a child, be on welfare, or be on unemployment. Do you want to enter the labor force? If so, what educational barriers do you have? What opportunities are there to earn and learn a skill at the same time? What kinds of jobs are there for people with no skills at all?

Section 11: Vocational or Apprenticeship Training Federal guidelines now require that an increasing percentage of women and minorities be hired on federally funded

construction projects. For example, women had to have a 6.9 percent participation rate by march 31, 1981 on construction sites where federal monies were involved. What are the career advantages for females in these areas?

Section 12: Job Market Even with an advanced degree, many people experience difficulty in finding employment. Job opportunities vary widely with geographic location and local economic conditions. How can you increase your job options?